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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/699,648

10/31/2000

Hiroshi Furukawa

P/1912-18

1406

7590

01/11/2006

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EXAMINER

BLOUNT, STEVEN

ART UNIT

PAPER NUMBER

2668

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/699,648

Applicant(s)

FURUKAWA ET AL.

Examiner

Steven Blount

Art Unit

2668

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 45 is/are rejected.
- 7) ☒ Claim(s) 46 - 49 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/26/05 has been entered.

Claim Objections

1. Claim 45 is objected to. "allocates" in lines 5 and 10 is misspelled.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 43 and 48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 3 of claim 43 and line 2 of claim 48, the use of the word "grasping" and "grasps" is indefinite.

In the preamble of claims 1, 7, 26, 32, and 40; and the corresponding portions of their dependent claims, the term "CDMA cellular" is indefinite, and should be changed to – CDMA cellular network – (or the like).

In claim 32, line 1, "The" needs to be changed to –A--.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 40 and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. patent 6,504,832 to Koo et al.

With regard to claim 40, Koo teaches a base station wherein a second code is allocated to a first code set (col 7 lines 24 – 30); assigning a priority to the allocated code set (col 10 lines 33+); allocating the code set to the transmission signal based on priority (col 10 lines 33+) and spreading the transmission signal based on the allocated and prioritized code set (col 7 lines 47+) and transmitted to a mobile (col 4 lines 30+).

With regard to claim 45, see the rejection of claim 40 and note that all of the apparatus limitations are described in the corresponding limitations of the method claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7, 12 - 14, 32, 43, and 48 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. patent 6,504,832 to Koo et al in view of U.S. patent 5,491,837 to Haartsen.

With regard to claim 7, Koo et al teaches generating quasi-orthogonal code through the use of a Walsh code in col 7 lines 24 – 31. Koo et al also teaches generating a long code in col 7, lines 37+. In line 39, it is stated that the long (scrambled) code is multiplied by the quasi-orthogonal code “to provide channelization”. See also col 9, lines 65+.

Beginning in col 9, line 34, a channel assigning procedure is described. In col 10, lines 37+, assigning priorities to codes having “(3) a higher priority (is) given to a fundamental channel or a control channel on which important control channel information should be transmitted with less errors.” Spreading is discussed in col 7, line 44 – 47. Although it appears that this priority appears to be assigned to a Walsh code alone, it would be obvious to one of ordinary skill in the art to apply this prioritization scheme to the combined long code/quasi-orthogonal code scheme mentioned above.

The examiner notes that, in addition to having the long code multiplied by the quasi-orthogonal code, it is stated in col 10, lines 2+, that a quasi-orthogonal code mask and Walsh code are “mixed” (col 10, line 2) to generate a quasi-orthogonal code. These quasi-orthogonal codes are assigned based on priority as described in col 10, lines 34+. The examiner believes that, while not explicitly stated, “mixing” is an obvious form of multiplying.

It is additionally noted that in col 10 lines 33+, three methods of code assignment are discussed, including a third wherein "a higher priority is given to a fundamental channel or control channel on which important control information should be transmitted with less errors. The channel priority can be adjusted as needed.

It is further noted that the claim limitation in the last paragraph of this claim, "wherein determining a priority of said combined code for each transmission signal based on a transmission quality required amount required by said mobile station receiving each said transmission signal" is met by Koo by virtue of the fact that Koo teaches, in col 10 lines 35+, "Users are classified and a Walsh code is assigned to a user in a high class" (note also the mention of "QOS" in the previous sentence) wherein this classification based on QOS would meet the limitation of the mobile stations' "quality required amount".

While Koos teaches the invention as described above, Koos does not teach determining priority for the combined code for each signal based on a channel quality value measured by the mobile station. This is taught in Haartsen. See col 5 lines 30+, Col 8 lines 40+, and col 10 lines 27+.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have measured the channel quality in Koos at the mobile station and determined priority for the combined codes based on these measurements, in light of the teachings of Haartsen, in order to provide a more accurate means for determining the required priority values based on environmental conditions.

With regard to claim 12, error rate would be an obvious QOS categorization, and the examiner takes Official Notice that error rate is used to classify values according to different QOS categories.

With regard to claim 13, transmission rate would be an obvious QOS categorization in view of the well known fact that a higher transmission rate for a given system will generally result in a higher QOS than that for a lower transmission rate.

With regard to claim 14, see the rejection of claims 12 and 13 above and note that the use of these two measures together would be obvious to reach a synergistic result.

With regard to claim 32, see the rejection of claim 7 above and note that the means described in the specification correspond to the elements described in the rejection of claim 7.

With regard to claims 43 and 48, see the rejection of claims 40 and 45 in paragraph 5 above and note the discussion of the mobile station measuring channel quality above.

7. Claims 46 – 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to include the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 10/26/05 have been fully considered but they are not fully persuasive.

The examiner has considered applicants remarks on page 21 of the amendment/response, particularly the comment that “However, this does not disclose the explicitly recited step of determining priority for the combined code based on channel quality”. In response, the examiner notes that independent claims 1, and 26 have been allowed in view of the fact that neither Koo nor Haartsen teach or suggest that the channel quality is actually a measured feature which is used to determine priority. However, Independent claims 7 and 32 do not require the step of “determining priority for the combined code *based on channel quality*” (emphasis added) and they have not been allowed on this basis. See also the underlined portion in paragraph 3 above, and note that a “transmission required amount required by said mobile station” (ie, a parameter that is not actively measured but which could be known in advance) is suggested by the user classification/QOS means taught in Koo in col 10 lines 35+, as discussed above.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Blount whose telephone number is 571-272-3071. The examiner can normally be reached on M-F 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Mr. Chau Nguyen, can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

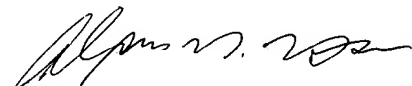
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Status information for unpublished applications is available through Private PAIR only.

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SB

12/28/05



ALPUS H. HSU
PRIMARY EXAMINER